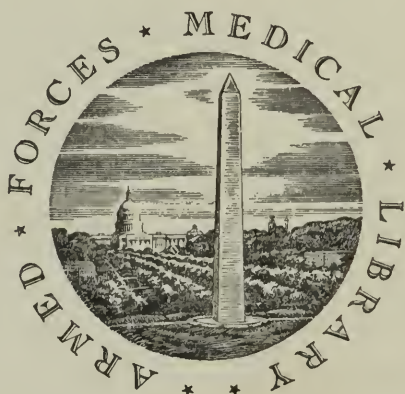




UNITED STATES OF AMERICA



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WASHINGTON, D.C.

A
DISSERTATION

ON THE

EFFECTS OF THE PASSIONS UPON THE BODY.



AN

INAUGURAL

DISSERTATION

ON THE

EFFECTS OF THE PASSIONS UPON THE BODY;

SUBMITTED TO THE EXAMINATION OF THE

Rev. John Ewing, S. T. P. Provost,

THE MEDICAL PROFESSORS AND TRUSTEES

OF THE

UNIVERSITY OF PENNSYLVANIA,

FOR THE DEGREE OF DOCTOR OF MEDICINE,

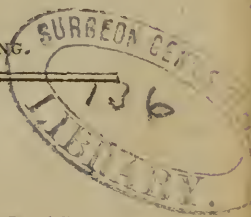
ON THE 19th DAY OF MAY, 1794.

By Henry Rose, of Virginia,

HONORARY MEMBER OF THE PHILADELPHIA MEDICAL AND
CHEMICAL SOCIETIES, AND MEMBER OF THE
AMERICAN MEDICAL SOCIETY.

*Know then, whatever cheerful and serene
Supports the mind, supports the body too :
Hence the most vital movement mortals feel,
Is Hope, the balm and life—blood of the soul,
It pleases and it lasts.*

ARMSTRONG.



PHILADELPHIA:

PRINTED BY WILLIAM W. WOODWARD,
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CHESNUT-STREET.

1794.

To

Mr Drysdale

From his friend

and fellow

graduate

The Author



TO
WILLIAM SHIPPEN, M. D.

PROFESSOR OF ANATOMY, SURGERY, &c. IN THE
UNIVERSITY OF PENNSYLVANIA.

A MAN whose character, as a Professor, is deservedly considered in many respects as unparalleled, and as a Physician and a Citizen, justly stands in the highest point of esteem.—Whilst I am paying this tribute, permit me, Sir, to acknowledge, with what assiduity, care, and diligence, you have conducted me through the arcana of Nature to this post of honour; and gratitude will not allow me to pass unnoticed the undisguised acts of friendship and hospitality I always experienced during my stay within your walls.

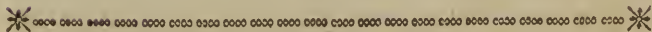
With the highest sense of Respect,

Dear Sir,

I remain your obliged

Friend and Pupil,

The AUTHOR.





A DISSERTATION, &c.

THE mind and body although widely different in themselves, yet they are so formed, and wonderfully united in us, that the one may be affected by the other in reciprocal sympathy.

So intimate is this existing connection, that every sensation of the mind, in a manner affects the body, the one, therefore, will be affected by the diseases of the other. Every person must be sensible of the affections of the will, nor was the pride of the Stoics free from this, although they denied these affections to interrupt their divine wisdom. Philosophers, therefore, feigned to know many things concerning the seat of the will in the body. Aristotle and the Peripatetics, placed it in the heart, and the ancients in the brain. Plato divided and distinguished all the passions into two, the covetous and irascible, the former he placed in the heart, the latter in the liver. There are some again who divide the various passions farther, and give to each affection of the mind separate seats. And finally, Helmontius, and Des Cartes, place all the passions and faculties collectively; the former in the cardia or upper orifice of the stomach, the latter in

the Pineal gland. That the brain is the seat of the mind, is a point, I believe, admitted on all hands, but whether occupying that particular part, the Pineal gland, will not be decided here, either pro or con ; but that the mind, will or passions, operate upon the corporeal part of our system, through the medium of the Nerves, whether considered as taking their origin from the Encephalon, or as mere appendages thereto. All this, I say, appears probable from the effects of ligatures, made upon the nerves, and of the destruction of their continuity. It appears that in either, in an entire state, motions may be communicated from the brain to other parts of the system, and from the latter to the former ; from injuries done the Brain, by either external or internal violence, the laws of sensation are impaired, and sometimes destroyed ; and from the same experiments it would appear, that the Brain is the organ of sensation and volition, and of the several intellectual operations intervening between these ; all which is confirmed by the effects of the organic affection of the Brain upon the intellectual faculties.

The Brain is thus the sensorium or corporeal organ more immediately the seat of, or connected with the mind, and so far as corporeal organ is employed, all the thoughts arising in consequence of impression are the operations of the Brain and are modified by its various conditions.

Without entering into a discussion of the laws of sensation, either of impression or of consciousness it is adequate to our purpose, to premise, that the mind seems to be excited by the force of impression, from the pleasure or pain arising from it, by the degree of emotion or passion produced by these ; and by the emotion being more or less related to the person feeling ; and it may not be amiss to add here, that the mind is capable of receiving but one impression at a time.

With this, it remains for us to consider how far the passions, as appendages of the mind are connected with the body and how far they are conducive to health or disease.

The passions are necessary and natural parts of our constitution, and by the order of nature they never were intended as a source of disease either to body or mind; on the contrary when caused to roll within their destined orbits, they prove reciprocally serviceable to each other.

As to the body, they preserve the health of that, not only by exciting us to exercise; but likewise as an agency and necessary stimulus to the support of life, by immediately and separately affecting the circulation of the blood, for in proportion as these internal senses are absent, the motion of the circulating mass is diminished and the function of secretion impeded. Neither is this sentient principle of itself sufficient, to preserve a due composition and proper assimilation of the fluids, for the purposes of secretion and nutrition. For the plastick power of the fluids is so great that should it happen that the necessary stimulus to motion be withheld they may coagulate into a viscid mass. This is notified in a deep and protracted sleep; this situation in which the mind rests, renders the circulation slow and the blood itself discovers a disposition to stagnate. Hence if the sleep be still further protracted, the fluids of the body will acquire a tenacity that will be difficult to destroy, and thereby the purpose for which they were intended by nature will be defeated. Neither ought these injuries to be ascribed alone to the body's being in a state of rest, but to an insensibility or inactivity of the passions. The same space of time is passed by persons in a state of watchfulness, the passions then in a state of imperfect action, without any exercise of the body, when the fluids are neither rendered viscid nor the circulation retarded.

It is equally certain that some of the passions diminish the circulation of the blood, and produce a temporary suspension of the secretions. If these are not truly immoderate and of long continuance they may be quickly removed, by a resuscitation of the more alert passions of the mind.

And here it is to be remarked that these two kinds of passions, which we will call the *impelling* or *repelling* or in other words, those that increase and those that diminish the power of the vital and natural functions, which are very wisely and curiously to be opposed to each other, by which means, the one can be moderated, and corrected by the other. For if the mind is acted upon always by the more vivid and more active senses; the spirits will be exhausted, and the excitability will be worn down so far as to be but little influenced by the most powerful stimuli of any kind. But the *repelling* or debilitating check this unnatural and diseased state of excitement, strike an equilibrium, and reduce the system to the standard of health.

Such appear to be the resulting convenience of the passions, when curbed, and kept within due bounds. But as all things are put in a worse situation when changed from a law of nature; so, the passions when they exceed either way their certain order and limits, they become dissolute and ought to be avoided; not because they disturb the tranquility of the mind alone, but as they injure the temperament of the body. They, with a rapid and tumultuous impetus precipitate the motion of the blood and spirits, or diminish their energy so far as entirely to subdue them. Again, they violently contract or immoderately relax the solids.

These few things being premised, we next proceed to distinguish each passion; but previously it will not be improper to observe, that it is not my intention in the following pages

to describe the more trifling emotions of the mind, or to run into metaphysical subtilties, but to particularize the symptoms of the more important, at the same time shall mark their phenomena and the diseases of which they are productive.

All the motions of the mind although various in their nature and effects, seem to arise from impressions made upon our organs of sense, which may prove of a pleasant or unpleasant nature, and accordingly excite emotions agreeable to the object presented. Of the first description, are joy, desire and hope; and of the last are grief, hatred and fear; these being the primitive, and upon which the others must depend, and of which they are compounded. And these are faculties of the mind that constitute the elements of life; but, when perverted or erring in extremes, become destructive to its existence. Thus the extravagance of hope may be exalted into enthusiasm bordering upon madness, and excessive fear may sink into despair.

When joy seizes the breast, the heart suddenly leaps, the eyes shine with splendour, the cheeks partake of a beautiful redness and an ornamenting light beams on the countenance; The body is agreeably relaxed, and a proportion of blood, exciting the most pleasing sensations, is thrilled to the most remote part of the system. But, although, the impetus of the blood be increased, it must be observed, that this affection has not that influence upon the arterial system that disposes it to febrile action, but such a warmth is induced only, as proves grateful. A tone of the solids consistent with health, most generally attends at the same time the circulation becomes equable, and in a state proportionate to the state of the solids. It frequently produces a flow of tears, which generally serves to relieve nature, and are mostly accompanied with high mental gratification. Superfluous joy being moderated by the general mode of evacu-

ation renders the body more agile and lively, and very much assists the whole assimilating faculty. But when immoderate, produces effects equally as distressing and alarming as a moderate proportion proves beneficial. It quickly like other powerful stimuli wears down the excitability, indirect debility is induced and frequently death. Hence the necessity of imparting good news gradually and accommodating stimulus to excitability. The celebrated Boerhaave affords us an instance of the effects of immoderate joy in a girl, and history gives us many cases of the same sort. The story of the Roman mother is well known, who was bewailing the death of her son, he suddenly and unexpectedly appeared, the mother dropped down dead the instant he entered the apartment. Here the excitability was accumulated, whilst the woman was labouring under the debilitating passion of grief, indirect debility was induced, and instant death followed. Our Professor of the institutes makes mention of a case, the man was a door-keeper to Congress, he expired suddenly upon the receipt of news, that would have been a balm to his soul, viz. the capture of Lord Cornwallis. Therefore the greatest deference ought to be paid to the observation of Seneca; *res severa est verum gaudium.*

Desire being a passion compounded of hope and fear, its effects must at times be very much varied. When united with hope, it quickens the circulation of the blood and occasions a great flow of spirits; but when with fear, it diminishes the last described power; at the same time the moving fibre is reduced to a state of atony, and febrile diseases not unfrequently ensue. It also varies agreeable to the nature of the thing it craves. To describe all the species of this passion would be endless; therefore I will make choice of the most

principal one, namely, the passion of love, or a desire of some grateful form.


When accidentally the form of a Venus has been presented to our view, love seems to arise within us, gradually, all warmth is caused to vanish from the mind, the flow and tumult of the passions, subside, and the affected languish into all pleasantness and softness; and harmony, with her silver train, ornaments all his walks. Solitude, shades and evening walks are sought for, objects of pity are cherished, and all the effusions of sentiment are tender, sedate and sympathetic, and frightful dreams infest the tedious night. Nor is there wanting a consentaneous emotion of the body, a gentle sensation creeps through all the nervous system, the circulation becomes equable, and the solids are reduced to an agreeable degree of relaxation. Such are the effects of Love in its primitive and incipient stages, before it has made impressions of a permanent and fixed nature. But when it becomes deeper seated, it disturbs the serenity of the mind, and the general economy of the body—the countenance then becomes hung over with languor, the eyes indicate some remarkable desire; the breast rises and falls like the disturbed waters of the ocean, with deep and languishing sighs. The body becomes effeminated, and it unlocks every manly power of the soul. The afflicted person is particularly agitated when in presence of the beloved object. The heart leaps, and its Systole and Dyastole is repeated with increased rapidity; the pulse performs an inordinate action; the countenance at first is suffused with redness and then suddenly becomes pale. In proportion to the vehemence of the passion, these symptoms are increased, and when violently excited, fever attended with great heat, palpitation of the heart, and* a sense of burning

* Haller's Physiology Vol. v. Page 582.

through the whole circulatory system, has been the consequence. Sometimes the breathing is laborious, the eyes are veiled with a cloud of mist, and the body is covered with a cold sweat. No passion so imperceptibly undermines the constitution as the one now under consideration ; debility, the predisposing cause and mother of almost every disease, to which the human species is liable, inevitably follows : that pleasant languor, which at first was so welcome to the body, at length proves to be its destroyer. From the beginning the induced debility and effeminacy, the various perturbations, which immediately follow, cannot be sustained without the greatest agitation of both body and mind. But the irregular and desultory flow of the spirits, the inequable flow of the blood, and the disordered secretions which invariably take place, so far derange and exhaust the whole system, that frequently this state ends in an incurable *Tabes* : Thus, the emperor Antiochus, secretly pined away, the cause of his disease being kept a secret from his Physicians. When this passion exceeds the bounds ascribed to it by nature, and the object of his wishes cannot be obtained, it sometimes induces melancholia, and sometimes mania ; varying agreeable to the temperament of the body, and also according to the degree of excitement, when this disappointment is made.

Hope exhilarates the mind to a grateful anticipation, from whence appears in the body the more placid effects of a lenient joy. It is this sweet and inestimable comfort that principally leads us on to respected old age, and it is this averts the sadness and horrible despair, that are too often cherished, viz. the evils and misfortunes that await mankind through life. Without this faculty, the functions of the animal economy, must soon be eclipsed, neither has man any resource, from whence the vital, and natural powers, as far as a mental agent is necessary, can be so well supported.

That unwelcome guest, grief, makes its appearance, with tears, weeping and sobbing. Inspiration and expiration become deep and difficult, the eyes lose their animating brilliancy and become fixed, and the unfortunate, stand with an immovable countenance; the relaxed cheeks assume a livid paleness, and nothing but gloom is painted in the imagination. Whilst this hostile emotion occupies the breast, health, joy and felicity languish and disappear, the muscular system is brought to a state of relaxation, the nervous to a state of diminished sensibility, and the vital and voluntary motions are retarded and oppressed. No passion so far impairs the healthy functions of the stomach, the appetite is destroyed and indigestion induced; the intestines are debilitated and distended with wind; the secretions and excretions are irregular. Hysteria, hypochondriasis, dropy, tabes, and fatal marasmus are too often the serious consequences. It impedes the transit of the blood through the Lungs, difficult and deep respiration ensue, the efforts of nature to quicken the deficient motion of the blood; by occupying the whole attention, and suspending the stimulus of a more exhilarating passion, it renders all the senses dull and imperfect, but particularly vision. When it is less oppressive, and protracted, the whole body imperceptibly is led into a state of emaciation. But grief in excess has imitated the violent efforts of anger, and terminated in phrenitis, apoplexy, mania and suicide.

Hatred, when sudden and vehement, is called anger,—which next offers itself for consideration. When this passion has reached its summit, the eyes are forced forward, and made protuberant, they burn with envy, the muscles of the forehead, supercilia, and of all the face are thrown into violent and contorted positions, the blood bursts into the face, the lips take on  tremulous motion, the voice *a* is thick and stammering. Anger excites and contracts all

the moving fibres, the muscular strength at one time is doubly encreased, and at another its power is very much diminished, different in different persons, according to their several constitutions ; it accelerates the motion and increases the impetus of the blood. All these causes conspiring, the vessels are thrown into febrile action. In this apparently universal constriction, the Rima Glottidis is spasmodically affected, and the voice becomes rough and violent ; during this situation of the Glottis the salivary glands discharge copiously, with a frothing at the mouth, which symptoms often accompany this furor. Hence also the proportion of air necessary to the inflation of the Lungs, being withheld, the return of the blood by the Jugular veins and descending Cava, of course must be considerably impeded, the countenance becomes flushed, and sometimes of a livid hue, to the same power of contraction as mentioned above, the corrugation and contortion of the muscles must be owing. Anger much increases perspiration and all the different secretions of the body, an increased secretion and discharge of bile very frequently follow, with contortions of the Abdominal Viscera. By this strong action and reaction of the vessels and their contents, recent and sometimes long confirmed Cicatrices are torn asunder. Again, it is frequently attended, or rather there is consequent to it apoplexy, pleurisy, hæmorrhages, phrenites, violent fever, and in females, a suppression of milk, and cancerous affections of the Mammæ ; but to these odious and disagreeable hosts, both to body and mind, there sometimes follow great debility, languor and depression ; as the turbulent ocean sinketh into a calm.

When the passion of fear has occupied the mind of man, the lively rouge of the cheeks is seen to vanish, the hairs of the head to tremble, and erect their ends to the heavens*,

* Fear has been known to turn the hair white in the course of a very few minutes.

the eyes roll with uncertain hope, the astonished heart leaps, the joints tremble and withdraw from their destined duty, a cold clammy sweat is discharged from every pore of the body. Fear is seen to repel and debilitate the powers of life, sometimes its influence has quite a different effect; but generally universal debility, chills, trepidation, and relaxation of the different sphincters of the body. The peristaltic motion of the intestines is increased, diarrhea*, Icterus, and schirrus gangrene have been noticed as the effects of fear. It weakens the power of digestion, and causes flatulencies, eructations, acidity and other concomitants of dyspepsia. By this depression of spirits, a necessary stimulus to life and more particularly of health is suspended; by this means also the power of the Heart and Arteries to propel the blood to their extremities is diminished, the blood consequently is accumulated about the Heart and Lungs, a small quick pulse indicant of this oppression generally attends. This state remaining untill it is assisted by the intervention of some potent stimulus, sufficient to enable her to propel the blood to the superficies; to this follows an increased degree of heat, followed by perspiration, analogous to the efforts of nature in an intermittent fever. When, as yet its violence remains, and terror is pronounced, it does not suppress the power of the spirits, but on the contrary instigates them to strong and powerful endeavours, it excites the latent energy of the system into vigorous action, and whilst these tumultuous and irregular exertions are kept up, it appears as if all opposition would be compelled to yield. *Non Vultus non calor unus.* It has a remarkable effect in rendering those, under its influence, more liable to the infection of contagious diseases. Clarke† in his observation on the predisposing causes of the remittent fever of the East Indies, takes notice of the debilitating passions, such as grief and

* Falconer, page 39.

† Page 164.

fear, and marks them as the most powerful causes. And asserts that it is owing to this circumstance that fevers and alvine fluxes are so fatal to young adventurers, who annually emigrate in expectation of acquiring riches, and upon their arrival, finding all their delusive hope suddenly dissipated, they become low spirited, and are carried off in a very few hours. Whilst others as little inured to the climate and exposed to the same remote causes, but who have better prospects, either escape the epidemic or have it in a less malignant form, when attacked.

When the impression has been very strong, tremors, melancholy, palsy, apoplexy blindness, abortions, disjunctions of the sutures of the cranium and death itself have been the melancholy consequences. Sometimes however its effects have been instrumental to the cure of many of the serious afflictions of our frail machine ; Pains of the body and maniacal disorders have frequently been removed by inspiring ideas of fear and apprehension of danger—By this however it cannot be denied but that this passion, when highly excited will prove a most powerful stimulant. Violent exertions of strength have been shewn, speech has been restored to the dumb, and strength to the parylytic patient. Gout, sciatica, intermittent fevers, diarrhea, and epilepsy have in turn been cured, and persons on the brink of eternity have been restored by it.

Fear and grief combined with anger, when frequent and long continued, debilitate the whole body, suppress perspiration and diminish the vital heat, hence there follows dropsey, palsy, and many cronic diseases, that render the person a burthen to himself and friends the remainder of his miserable existence.

The effects of grief are more equable, than the irregular and disultory operations of fear.

The passions as yet undescribed, although they partake of one or the other that has already been noticed, or a composition of many; each has its proper character, which may be exposed in a few words, and I will give a short sketch of pride.

In this, the eye-brows and forehead, are elevated, the eyes behold every object with the utmost disdain and contempt, the breast and face become tumid, the deportment of body firm and elevates itself as it were on high; which we possess either as the gift of nature or of fortune; agreeable to its origin it renders them more or less cheerful, expands and fills the heart with warm blood, but as there is always joined to this some *nîsus* of the mind, to support its supposed dignity, so it increases the impetus of the blood, gives an increased tone to the muscular system but more particularly to the muscles of the face and upper extremities; pride resists the effects of the more relaxing passions, but it may be too much indulged, and thereby give too much rigidity to the different fibres of the system, and hence by the frequent renewal of it, that state which verges upon anger being kept up, the high degree of excitement existing at the same time in the vessels of the brain, either terminates in the melancholy diseases produced by anger itself or in an obstinate collapse; or in other words indirect debility is induced in the brain as in other parts of our complicated machine; and may it not be owing to these two states that the consequent diseases are of so opposite a nature, sometimes melancholy and at others mania, either of a tonic or atonic description?

Shame suffuses the countenance and breasts with a redness and glowing heat, the lips tremble, the knees shake, the eyes are dejected, and the voice clings to the jaws. The influenced person can neither think or speak rightly or naturally. Shame partakes a little of grief and is opposed to

pride, for it arises from the bad, abject opinion we have formed of ourselves. Whereas pride gives temporary strength to our whole system, and particularly to the head neck, and superior extremities, on the contrary when these parts are under the influence of shame, they are in a state of relaxation, as must be conspicuously evident, from the position of the muscles of the face and upper extremities as above described. Hence a larger proportion of blood is transmitted to the head, and the face is rendered more red than natural. And may it not be from the same cause that this degree of perturbation of the brain and most of the senses as well external as internal, arises*? This mode of accounting for the symptoms of shame, appear to be somewhat verified, from its appearing more frequently in the younger part of the human species, in whom the superior parts are more relaxed, and in a more irritable state. This affection sometimes, in Plethoric persons, terminate in apoplexy.

There is a species of joy arising from the presentation of an object to the eye or to the imagination, the incoherency and absurdity of which produces laughter. The Lungs exercise their whole strength, in this convulsive motion, from hence it contributes to increase and agitate the whole circulating mass, and also from its having the power of exciting into action the more vivid exertions of the mind as well as body : laughter aids in the removal of melancholia and leucophlegmatia. But how far a long continuance of it shall

* In the sudden flow of blood to the face, when under the influence of shame, may not the mind have a power of stimulating the arteries, of a particular part and increase their oscillatory motion, in the same manner that the motion of the heart is increased by any violent affection of the mind, or in the same manner that any named muscle of the body is brought into action by the will, and very frequently this motion takes place without the presence of the will, which occasionally may be the case with the arteries in time of blushing?

prove detrimental, and be productive of the consequences incidental to a sthenic diathesis suddenly induced, must be sufficiently evident. Apoplexy and Peripneumony have succeeded this passion. Thus Zeuxis is said to have died suddenly from the laughter excited by a comic work, the production of his own imagination.

Pity is that sensation of the mind, through which we are affected, by the evils and misfortunes of one or more persons; it seems to be formed by the union of joy and grief; the one being called forth by afflictions, the other from a tacit approbation of that passion; the influence of this upon the different functions of the animal economy is so very moderate as to afford little or no interruption. For although there is a proportion of grief present, yet the mind conscious of its own rectitude, resists this impending oppression and keeps up an healthy degree of excitement. Its effects are seldom very powerful, but it has been observed to have greater influence on the Lachrimal gland, than even sorrow itself.

Envy distorts the mouth, eyes and muscles of the face, and the whole countenance. It is composed of desire, anger and grief: The desire of a certain gratification, grief at the absence of that; and anger, pointed at him who possesses that gratification. These disorderly emotions much derange the serenity of the mind, and make appear a repugnance through every function of the body. A proportion of sadness constituting a proportional part of this passion depresses and debilitates the power of both body and mind. Whilst anger and desire act their part, the system takes on a sthenic diathesis; should it so happen, that they were alternated, a balance might be struck, and the issue would be favorable: but it most generally happens that the one or the other mounts the carr and drives on to a state of disorder. It is said to cause paleness of the countenance

and to excite the biliary discharge*. Its other effects resemble those of the passions of which it is composed, as above remarked.

As yet there remains one passion more to be mentioned which is nearly allied to envy, but more vehement and complicated, namely, Jealousy. This occasionally shews love, fear, grief, pride, desire and anger. In the midst of so much contention, how far the system must be injured, and how far this ought to be held up as the causes of many diseases must be evident, and I hope sufficiently so, from the influence of these several passions when taken in a separate point of view.

Those moving in a high or public sphere of life, who are infested with honours and persecuted with solicitations, who are obliged to dissemble their feeling as given them by nature, and live as it were at variance with themselves, also experience in their health the bad effects of ambition, and such disappointments and unwished for vicissitudes as are inseparable from human affairs.

All these sudden and accidental emotions of the mind affect the corporeal functions openly and at repeated paroxysms. Indeed there are three appetites of an inferior order, namely, lust, hunger and thirst; but as they do not take their origin from the mind, and it is only secondarily affected, and that they have their influence by the intervention of a certain predisposition of the body, I shall therefore omit the consideration of them here as not appertaining to our subject.

The symptoms of the passions being so far laid down, and I hope with sufficient accuracy and perspicuity to prevent their being confounded with each other, I will in the next place endeavour to shew in what manner they may be opposed to each other with advantage so as to keep up or obtain an equilibrium, being the principal preventative against their influence as disposing to derangement and disorder.

When truly each passion seperately shall be in an immoderate degree, they interrupt the functions of the system, so each has his opponent, and rejects or presides over him in turn. Thus joy is opposed to grief; for what the latter shall retard the former will accelerate, for as grief relaxes and diminishes the mobility of the Hypochondriac region, and the contained Viscera, so, laughter, partaking of joy, shakes and agitates these parts with a degree of briskness, removes the present immobility, gives new tone to their diathesis, and raises the diminished excitement. In a similar manner, love softens the harsh features brought forth by anger, and fear suppresses what hope excites.

Such is the wise counsel of nature teaching us moderation and the mode of preserving and procuring an equable temper. But unless we should form these into an inseparable chaos, we destroy that variety so useful in itself. That variety which proves so essential to mankind, in inducing them to turn their attention to the different objects and pursuits that present themselves, upon this great theatre of the universe. Besides all this, some one of the passions must prevail, and govern the mind; and every being has his peculiar attachment and inclination to adhere to some of these affections. With these affections, there are generally attending some peculiar temperament and habit of body.— But as the mind in this particular, is like the body, which

has become accustomed to the performance of some duty or business, which it returns to at particular periods, without being disordered, it bears this stimulus without being sensible of its impression. Here, the mind, in the ordinary pursuits of business is habituated to the action of some stimulus afforded by itself ; but this being withdrawn or superseded by one of a different kind, derangement and disorder are produced, both in body and mind, or in each separately, according to its power.

In the next place, I will endeavour to shew, how far the passions differ from each other in different temperaments ; and in the first place, it appears, that in a sanguine temperament of the body, the passions are more violent, yet quick, and in succession more various, the mind is prone to joy, hope and pleasure. In the choleric they are excited with more difficulty, but when brought into action, they are found to be more permanent and violent than in the sanguine. In these various emotions of the mind, when once we allow them to make a deep impression, their visits become too often repeated ; anger and pride principally come under this description. In melancholy, the emotions of the mind are never violent, but slow and constant, and always sad, apprehending some impending evil. The Phlegmatic are seldom, if ever, troubled with excesses of the passions of either kind, and seldomer indulge the most inoffensive.

There is so intimate a connection of every disposition of the mind, with the peculiar temperament of the body, that when ever a special disposition of the body is contracted, by the indulgence of some one of the passions, we necessarily induce a consentaneous temperament of the body ; and *vice versa*, when a particular habit of the body is formed, a peculiar disposition of mind follows.

From this mutual connection existing between the disposition of the mind and the temperament and habit of body, and from the dependence of the one upon the other, for their respective functions, when either is diseased, a remedy for the one will be equally serviceable to the other. To explain this, I will recite a few examples.

In those habits of the body that dispose to melancholy and grief, the mind should be strongly acted upon in the first situation, nor ought it to be allowed to dwell long upon any one subject. Grief, fear, and a too depressed opinion of ourselves, always attend this disposition of the body. So it requires a considerable proportion of hope and pride, to resist the depression induced by the former. At the same time it will not be thought improper to direct such medicines as will dilute, and increase the volume and impetus of the general circulating mass; and to administer such as will diminish the immobility of the nervous power. The choleric who for the most part are daring, proud and cruel ought to be reduced to a state of more lenity, by love and pity, and to be depressed by shame; in this case much good may be done by dilution and the exhibition of such medicines as will take off the existing rigidity and lower the general excitement. To those whose habits are warm and sanguine, whose minds are most easily operated upon, and are affected in the most violent manner by the exhilarating passions, it not only must prove serviceable in this case, to diminish the storm, by opposing it with the less inebriating emotions of the mind, such as grief and fear, but to lessen the strength of the moving fibre, and the tone of the arterial system, by confining the patient to a refrigerating and low diet. The Phlegmatic, whose minds are under the influence of too great a degree of torpor; may be roused into action by anger and elevated by joy; at the same time we should attempt to excite a diathesis, verging upon the sthenic, by the methods best known to effectuate that purpose.

This, I hope, will suffice to have been said upon the different temperaments. A proper regulation of the passions must avail much in acute and chronic diseases, and appears to be a circumstance of the utmost and last importance in their prevention as well as the cure.

How far a placid and equable temper of mind contributes to the removal of every fever of an acute kind, must be evident to every accurate observer of nature.

In slow and nervous fevers it is no less beneficial to relieve the mind by inspiring hope and adding new vigour to the system by the welcome news of joy. In all obstructions, and more particularly the humoral Asthma, it would seem to be a matter of considerable importance to excite laughter. For the repeated contractions and convulsions of the diaphragm may be expedient in removing the infarction of the Lungs. In the suppurative stage of tubercles of the Lungs, may not this action prove equally serviceable? Those who have observed the medicinal virtues of terror, remark that it sometimes is followed by good effects. But since the presence of this passion has produced very melancholy consequences, we ought to have recourse to an expedient of so formidable a nature, with the utmost caution, and then, but upon the most urgent and desperate occasions, as we do in the administration of every powerful remedy. The use made of it in removing Hiccough, is commonly known, and its powerful influence was sufficiently known to the immortal Boerhaave.

Besides all this, the mind demands no less attention in the healing of wounds. For the stimulating or impelling emotions contribute much to the increase of inflammation and suppuration; and on the other hand, the debilitating or repelling may and will have a contrary operation. And among the various and many effects of the passions upon the

constitution, we must not omit to mention of what immense application they have been in the prevention of an exacerbation of the intermittent fever, and also in aiding the system to contend with the contagion of infectious diseases.

There are worthy of notice, some functions of the mind which cannot with the strict rules of order be reduced to the class of passions, yet of much consequence to the Physician, and as an operation of the mind upon the body, may be subjoined to what has been mentioned in the foregoing pages. The first of these is a high degree of faith and confidence in the efficacy of remedies. Whether this operates by engrossing the mind and attention, and thereby rendering it inaccessible to other impressions, or by imparting such a degree of tone or strength as enables the system to resist their attacks, is difficult to determine ; but I am rather inclined to believe that both are concerned, and that they reciprocally assist each other. This power is found most efficacious in such disorders as recur at intervals. It however, is observable that unless the prepossession is very great, it is apt to fail in producing a cure. Another mental affection which has produced wonderful effects, is a determined resolution to resist the access of the complaint. However extraordinary this may seem, yet that it has been practised with great success, is a matter beyond doubt. It appears to have its influence in a manner similar to the power last spoken of, and to have been serviceable in nervous and periodical complaints. This appears to be not only a stimulus to the nervous system, but also a general and powerful tonic. And must it not be by the agency of this power of the mind, and its influence upon the body that the supposed possessors of animal magnetism effect such wonderful cures?

From the view here taken, of the influence of the passions upon the corporeal and vital systems, we may generally infer, that in cases where the powers of life are brought be-

low the standard of health, endeavours should be made to excite into action such passions as will aid in counteracting the leading symptoms of the disease. And when the disease itself consists in, or is aggravated by too high a degree of excitement of the vital functions, recourse may be had to the debilitating ones.

In doing this many difficulties remain yet to be got over, relative to the application of these potent and precarious instruments; since they cannot be brought to Chemical analysis: that we may ascertain their real and possessed virtues; neither can we form any judgment of their extent or quality, by their effects. For what may have a moderate operation in one economy, may in another be sufficient, to carry the system above the wished for point, and be succeeded by indirect debility; and since we are left so much in the dark, upon the manner of applying these agents, to the removal of diseases, and the difficulty of exciting them, when wanting, I fear it will be an insurmountable barrier to their use; though we may look forward with pleasure, to the time, when future ages will surmount this obstacle, and teach us how we are to accommodate these remedies to the excitability of the system.

THE END.

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